

gravity from particulate material of lower specific gravity, comprising a) a rotating member adapted for rotation about an axis, (b) material supply means to deliver said particulate material into said rotating member, c) a plurality of cavities for receiving said particulate material of higher specific gravity, extending radially outwardly with respect to the axis of rotation of said rotating member, said cavities each having an outwardly-extending outlet, and d) flow controlling means for controlling the flow of material from said outwardly-extending outlets of said cavities; wherein said flow controlling means comprises a fluid inlet communicating with said outwardly-extending outlet, a fluid outlet and a passage communicating therebetween and having a cross-sectional radius in the plane perpendicular to the longitudinal axis of said passage, wherein said passage is radially constrictible from a fully open to a closed condition while maintaining a cross-sectional shape which is substantially circular over a major range of such radial constriction.

15. (New) The centrifugal concentrator of claim 1 wherein said flow controlling means comprises a cylindrical elastomeric valve member disposed within said passage, and an annular elastomeric constrictor element mounted coaxially around said cylindrical elastomeric valve member and having a central thickened region for contacting and constricting said cylindrical elastomeric valve member.

16. (New) The centrifugal concentrator of claim 1 wherein said radially constrictible passage of said flow controlling means has a cross-sectional shape which is substantially circular over at least half said range of radial constriction of said passage.

17. (New) The centrifugal concentrator of claim 1 wherein said radially constrictible passage of said flow controlling means has a maximum dimension in the plane perpendicular to the longitudinal axis of said passage which remains comparable to the dimension of said passage perpendicular to said maximum dimension over a substantial range of radial constriction of said passage.

18. (New) The centrifugal concentrator of claim 3 wherein said radially constrictible passage of said flow controlling means has a maximum diameter of at least one-half inch.

19. (New) The centrifugal concentrator of claim 3 wherein said range of radial constriction of said passage is from at least as small as 1/8 inch to at least as great as 1/2 inch.

20. (New) The centrifugal concentrator of claim 2 wherein flow controlling means comprise a valve body, and said valve body comprises an air passageway communicating with a compressed air supply for supplying air under pressure to the exterior of said annular elastomeric constrictor element.

21. (New) The centrifugal concentrator of claim 2 wherein said flow controlling means comprise a valve body, and a pressure relief passage extending from the outer surface of said cylindrical elastomeric valve member to the exterior of the valve body.

22. (New) The centrifugal concentrator of claim 2 wherein said flow controlling means comprise a valve body and said annular elastomeric constrictor element is held in a chamber in said valve body and is pre-compressed to fit said chamber.

23. (New) The centrifugal concentrator of claim 7 wherein said air passageway communicating with a compressed air supply for supplying air under pressure to the exterior of said annular elastomeric constrictor element extends substantially axially within said valve body.

REMARKS

In the Office Action mailed 06/20/2002, the Examiner required a new oath or declaration due to the non-initialled, non-dated alteration to the first inventor's address. The third inventor, Stephen Scott Thomas has left the employ of his former employer and his current whereabouts are unknown. Consequently it has not been possible to obtain a new oath or declaration signed by the third inventor. The applicant will continue to seek the whereabouts of the third inventor and if necessary will file the necessary petition concerning the lack of the third inventor's signature.

In the Office Action mailed 06/20/2002, the Examiner objected to the